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G. B. Airy, Esq., President, in the Chair.

Sir R. I. Murchison, Belgrave Square, was balloted for and duly elected a Fellow of the Society.

The President read the following letter from Sir John Ross:—

"*London*, 6*th May*, 1850.

"Sir,—I am to request that you will be pleased to inform the President and Council of the Royal Astronomical Society that an expedition of discovery and research, under my direction, will sail from Loch Ryan on the 23d inst., to Baffin's Bay, and that I shall be happy to give every attention in my power to any wishes or instructions I may be honoured with from the Royal Astronomical Society.—I am, with truth and regard, Sir, your most obedient servant,
John Ross.

"N.B.—Letters posted in London on the 21st inst., will reach me in time if addressed to me at 'Northwest Castle, Stranraer.'

"*To the Secretary of the Royal Astronomical Society.*"

The thanks of the meeting were returned to Sir John Ross for his obliging offer.

The President then made a statement to the following effect:—

After completing the lunar reductions, and before engaging in any theoretical investigation, Mr. Airy made inquiry whether any mathematician was pursuing the same subject, when it appeared that Professor Hansen had undertaken this most difficult and important problem under the patronage, and with the pecuniary assistance, of the late King of Denmark. The matter was considered to be in the most satisfactory hands, as respected the power of the analyst and the singular intelligence of the patron. Some communications from Professor Hansen to the Royal Astronomical Society have shown the zeal and success with which he has prosecuted his researches,* but the death of the King of Denmark, and the unfortunate political differences which have lately disturbed that kingdom, threatened

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* See *Memoirs*, vol. xvi. p. 465, and *Monthly Notices*, vol. vii. p. 275.

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an interruption of the means necessary to carry on the computations and make the results public. Under these circumstances, and feeling that a correct theory of the moon, which should represent the immense series of Greenwich lunar observations, was not only most desirable in itself, but intimately connected with the Royal Observatory* and our national interests, Mr. Airy applied to the Lords Commissioners of the Admiralty for the small sum required to enable Professor Hansen to complete his work: it is almost needless to add that this was immediately granted in the handsomest manner.

The President stated that he had received from Dr. Henderson (now of Greenbank, St. Helen's, Lancashire) a new set of numbers for the teeth of wheels in a train to convert revolutions in solar time into revolutions in sidereal time, to which probably nothing comparable in accuracy had ever been produced. Dr. Henderson's numbers given in a former communication were founded upon a value of the sidereal day, differing from that in the *Nautical Almanac* by a perfectly insignificant quantity. This apparent difference, however, had stimulated Dr. Henderson to attempt a new combination of wheels, and he had discovered the following:—

If a spindle revolving in 24 solar hours carry a wheel of 50 teeth, which works in a wheel of 30 teeth on the second spindle; and if the second spindle carry a wheel of 182 teeth, which works in a wheel of 211 teeth on the third spindle; and if the third spindle carry a wheel of 196 teeth, which works in a wheel of 281 teeth on the fourth spindle,—then the time of revolution of that fourth spindle, in mean solar seconds, will be

$$86164^{s}\cdot090603274.$$

The length of the sidereal day adopted in the *Nautical Almanac* is

$$86164^{s}\cdot0906.$$

It is evident that these numbers are practically identical, inasmuch as the figures are the same as far as it has been thought necessary to retain decimals in the *Nautical Almanac.* Dr. Henderson estimates the difference at 1 second in 855 years, but even this estimation is too great.

THE NEW PLANET PARTHENOPE.

Dr. Annibal de Gasparis, assistant at the Royal Observatory, Naples, in a letter to Sir John Herschel, announces his discovery

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* The Royal Observatory of Greenwich was established for the express purpose of observing the moon, and rendering her motions useful to navigation; this object has been kept steadily in view for more than 150 years, and with complete ultimate success.

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